

Pesticide Core Exam: 1-Page Cheat Sheet

Signal words (acute toxicity)

Word	Category	Oral LD50 (mg/kg)
DANGER-POISON + skull & crossbones (+ PELIGRO)	I (highly toxic)	0-50
DANGER (no skull)	I (corrosive: severe eye/skin damage)	n/a
WARNING	II (moderate)	50-500
CAUTION	III (slight)	500-5,000
CAUTION or none	IV (low)	>5,000

Lower LD50 = more toxic. Risk = toxicity x exposure. "Keep Out of Reach of Children" goes on all labels.

Label must-knows

- The label is the law. Use inconsistent with labeling violates FIFRA.
- Mandatory: must / shall / do not. Advisory: should / recommended.
- EPA Reg. No. = product. EPA Est. No. = factory.
- REI = time before re-entry. PHI = days from last application to harvest.
- RUP = certified applicators or those under their direct supervision only.
- FIFRA 2(ee) OK (unless the label prohibits): lower rate, less often, unlisted pest on a labeled site, any method not prohibited, mixing with fertilizer. NEVER a higher rate or an unlisted site.

Environment

- Drift rises with fine droplets, high pressure, high boom, wind, and inversions (calm, cool air near the ground at dawn/dusk; smoke layers sideways).
- Leaching risk: sandy soil, low organic matter, shallow water table, soluble and persistent product.
- Runoff: slopes, compacted or saturated soil, heavy rain.
- Volatilization increases with heat. Photodegradation = sunlight. Microbes are fastest in warm, moist soil.
- Bees: don't spray blooms while bees forage. Keep an air gap or anti-backflow device when filling.
- Follow ESA bulletins (Bulletins Live! Two) when the label refers to them.

Pests / IPM

- Step 1: identify the pest. Then monitor, set thresholds, and combine methods (cultural, biological, mechanical, chemical, regulatory).
- Resistance: rotate modes of action.
- Complete metamorphosis: egg-larva-pupa-adult. Gradual: egg-nymph-adult.

Safety & first aid

- Skin is the #1 exposure route. Genital area absorbs fastest. Mixing concentrates is the riskiest task.
- Eyes: flush with clean water 15+ minutes. Skin: remove clothing, wash with soap and water. Inhaled: fresh air. Swallowed: follow the label (don't always induce vomiting).
- Poison Help: 1-800-222-1222. Bring the label to the doctor.
- Gloves: unlined chemical-resistant (nitrile/butyl), never leather or cotton. Pant legs OVER boots. Cuff gloves when working overhead.
- Wash PPE clothing separately. Discard clothing drenched with concentrate.
- Respirators: medical evaluation, fit test, replace cartridges on schedule or at breakthrough.
- OP/carbamate poisoning: cholinesterase inhibition (salivation, sweating, pinpoint pupils, twitching).
- Spills: Control, Contain, Clean up. Never hose into a drain.
- Triple rinse: 1/4 full, cap and shake, rinsate into the tank, repeat 3x. Make the container unusable, then recycle or dispose per label.
- Storage: locked, dry, ventilated, signed. Liquids below dry products. Never in food containers. Transport in the cargo area, secured.

Laws

- FIFRA (EPA): registration, labeling, RUPs, certification.
- FFDCA: EPA sets tolerances. FQPA (1996): kids, aggregate and cumulative risk.
- Section 18 = emergency exemption. 24(c) = special local need (state).
- WPS (40 CFR 170): farm workers and handlers. Annual training. Handlers 18+. AEZ.
- Commercial applicators 18+. Recertify at least every 5 years. States can be stricter.
- Supervising noncertified applicators: trained within 12 months, records kept 2 years, use-specific instructions, a way to communicate, 18+.
- Additional certification for fumigation (soil and non-soil) and aerial RUP use.

Math

- 1 acre = 43,560 sq ft. 1 gal = 128 fl oz.
- Acres/tank = tank gal ÷ GPA. Product/tank = rate x acres/tank.
- Product = lb a.i. ÷ (%a.i./100). mph = ft per min ÷ 88.
- GPA = GPM x 5,940 ÷ (mph x spacing in). 1/128-acre: oz caught = GPA.
- Replace nozzles about 10% over a new nozzle's output.

Unofficial. Original summary of public federal standards and EPA training material. Always follow the label and your state's rules.